

PLUMAS CORPORATION, FEATHER RIVER COORDINATED RESOURCE MGT.

Feather River Watershed Stewardship and Education Project Final Report

Agreement Number: G0822002

SNC Reference Number: SNC 080165

Funded by: Sierra Nevada Conservancy Grant Program
Safe Drinking Water, Water Quality and Supply, Flood Control
River and Coastal Protection Act of 2008 (Proposition 84)



Prepared by: Plumas Corporation

February 14, 2013



Sierra Nevada Conservancy-Progress Report

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Safe Drinking Water, Water Quality and Supply, Flood Control
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Grantee Name: Plumas Corporation, Feather River Coordinated Resource Mgt.

Project title: Feather River Watershed Stewardship and Education

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Submittal Date: 02/14/2013

Report Preparer: Gia Martynn

Phone #: 530-283-3739

Check one:

☒ **6-Month Progress Report**
☒ **Final Report**

6-Month Progress Reports should reflect the previous six months. **Final Reports** should reflect the entire grant period.

A. Progress Report Summary: (Please provide a general description of work completed during this reporting period.)

This grant was awarded on May 19, 2009 to Plumas Corporation under Sierra Nevada Conservancy's Proposition 84 grant program, authorized under the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Act of 2006. The grant was originally expected to fund one year of watershed education and stewardship program activities in the Upper Feather River Watershed. Due to the Proposition 84 bond freeze in 2009 and Plumas Corporation's ability to leverage grant funds we were able to make the budget cover multiple years, and the grant agreement was extended through March 31, 2013. This effectively helped fund three full school years of watershed education and community stewardship education implemented in partnership with Plumas Unified School District (PUSD), Feather River College (FRC), Feather River Land Trust (FRLT), and other local supporters.

The following summarizes accomplishments for the last six months from July 1 through December 31, 2012. Deliverables/milestones achieved over the entire grant period are summarized under Section B:

K-12 Education Coordination work between July 1-Dec. 31, 2012 included meeting with 6th grade instructors to schedule field trips for the year-long Watercourse Program including the final week long Plumas to the Pacific (P2P) field trips at the end of the year; communication with school district administration for approval of the 2012/13 field trip schedules; coordination with the Plumas to the Pacific field instructor/naturalist for the 2012/13 school year field trips; leading the first "backyard" field trips with the PUSD 6th grade classes (143 students served); communicating with the Plumas Fish and Game

Commission and Feather River College Education Talent Search regarding funding support and collaboration for the 2012/13 school year; planning, meetings, and outreach for local restoration by middle and high school students on Learning Landscapes for the 2012/13 school year; and organizing and leading four restoration project tours for middle and high school students from Quincy, Chester, and Westwood high schools in the fall of 2012 (81 students served).

Community Outreach work for the same period included participating in the Great Sierra River Cleanup event with cleanup efforts organized in three communities on Sept. 15, 2012. One hundred and twelve volunteers cleaned up an estimated 11 miles of river area, collecting over 1000 pounds of garbage and recyclable materials. Organized and held the Wild & Scenic Environmental Film Festival on Sept. 12, 2012. The event sold out to an estimated 200 viewers and six local citizen water monitors were given free admission and recognized with Certificates of Appreciation during intermission. Participated in the U.S. Forest Service Plumas National Forest's Fall Festival community event held on October 13th; approximately 150 attendees learned about aquatic insects as indicators of stream health. On July 13, planned and facilitated 8 Upward Bound summer program students and 2 FRC staff in a water quality field monitoring day. On November 19, organized and directed 18 FRC Watershed Restoration students through a water quality field monitoring lab for World Water Monitoring Day and an aquatic insect identification classroom lab. Lastly, we developed and purchased watershed awareness promotional products for distribution at community events. These included Kleen Kanteens, plant able seed wristbands for children, and laminated watershed decals. All promo items were imprinted with "Clean Water Starts Here" logo or tagline.

B. Deliverables or Outcomes completed during this Reporting Period or Milestones

Achieved: (Include specific information, such as public meetings held, agency participation, partnerships developed, or acres mapped, treated or restored)

Deliverables, as outlined in the project workplan, achieved over the three plus year grant period for the Feather River Watershed Stewardship and Education project are listed below:

K-12 Regional Watershed Education Coordination

Task- "The Watercourse" monthly field trips and activities

- Successful implementation of "The Watercourse" year-long study of the Feather River Watershed with all Plumas Unified School District 6th grade students during the 2009/10, 2010/11, and 2011/12 school years. This program included monthly field trips and activities that culminated at the end of the year with the week-long "Plumas to the Pacific" field trips. During the 3-year period a total of 516 sixth grade students completed the program, which encompassed students following the Feather River in their "backyard" studying the headwaters of creeks closest to each school site. During the school year students learned about the water cycle, where their water came from, the geology of their watershed, common native plants and animals in their watershed, and the seven main uses of

water. After following and studying their respective creeks during their monthly field trips they turned their attention to their “front yard” following the creeks and rivers as they left Plumas County and eventually reached the plumbing of the California State Water Project and the Pacific Ocean.

- An average of 18 field trips per year was led during the Watercourse Program, for a total of 54 field trips during the grant period. These field trips included the Adventures in Learning River Rafting trip lead by the Feather River College Outdoor Recreation Leadership Program.

Task- “Plumas to the Pacific” 5-day field trips

- A total of 12 “Plumas to the Pacific” field trips were taken for a total of 51 days. Their “front yard” study focused on the uses of water as it flowed downstream including Pacific Gas & Electric’s hydroelectric dams in the Feather River canyon, State Water Project (SWP) reservoir at Lake Oroville, agriculture and wildlife refuges in the Central Valley, transportation at the Port of Sacramento, a State Water Project pumping plant in the Delta, and marine life in the San Francisco Bay/Pacific Ocean.

Task- “The Watercourse” and “Plumas to the Pacific” curriculum documentation

- Developed and distributed a full curriculum set for each “Watercourse” in PUSD including Portola, Quincy, Taylorsville, Greenville, and Chester. Curriculum files included maps, vocabulary, and lesson plans which were given to each sixth grade instructor at a full day training workshop with six teachers held on January 27, 2012.

Task- Coordination of regional stewardship education efforts thru WATERS

- WATERS (Watershed Awareness through Education, Restoration, and Stewardship) meetings were held twice a year from 2010 through 2012. A total of 6 meetings were held bringing together an average of six local watershed education partners per meeting to share and collaborate on education efforts.

Task- Facilitation of “Trout in the Classroom” teacher trainings

- Trout in the Classroom (TIC) was implemented throughout the school district each year in collaboration with the Trout Unlimited Feather River Chapter. An average of 16 classrooms per year (400 students) incubated trout eggs into young fry in their classrooms.
- Held a TIC teacher training that covered Project WET and WILD information as well as TIC housekeeping and support in April 2010 for 17 K-6 teachers; partnered with Trout Unlimited who provided workshop materials and covered substitute teacher costs so teachers could attend.

Community Outreach Coordination

Task- Program presentations to other Sierra Nevada regions and/or downstream water users

- October 2010 submitted a proposal to the Metropolitan Water District of Southern California to develop a partnership to educate teachers and students from the water district about their primary source of water starting in the Feather River watershed.
- Participated in Watershed Day at the Capitol in 2011 with five eighth grade students from Quincy Jr./Sr. High School and in 2012 with 4 high school students (2 from Portola and 2 from Chester High schools). Students gave presentations about their watershed education experiences to state Senator Ted Gaines and Assemblyman Dan Logue.
- Presentations and a Meadow Restoration Tour were given at the Sierra Nevada Alliance's Meadow Forum in June 2011. Presentations covered watershed restoration planning, design, and monitoring. Forum attendance of presentations averaged approximately 40-50 people. The tour visited Red Clover Valley where participants visited three project sites in various stages of planning or completion. A total of 60 participants attended the tour.
- Wild & Scenic Environmental Film Festival in Nevada City, CA featured our *Restoring Natures Reservoirs: Mountain Meadows in the Feather River Watershed* in January 2010. In addition a local screening was held at the Quincy Town Hall Theater and the film was shared at the Lunch & Learn Program series at the Plumas County Library. Combined, the film showings reached over 100 viewers.
- The local University of California Cooperative Extension and UC Davis Art of Regional Change invited our Watershed Coordinator to participate in a Digital Story Project effort in 2009. The stories educate on a variety of environmental concerns affecting private landowners and have been shared at numerous venues both locally and regionally, as well as used for educational purposes in classrooms.
- Presented two campfire programs for the Plumas National Forest's Gansner Bar Campfire Summer Program, reaching approximately 50 campers. Majority of campers were from the Central Valley (downstream water users).
- Worked with a graduate student from University of Michigan and Roaring Fork Conservancy in Colorado on a public awareness case study of the Feather River Coordinated Resource Management group, providing phone interviews and promo materials.

Task- Water Quality Brochure Series

- Produced two publications. One publication, intended for a layperson considering a stream or meadow restoration project on their property, entitled, "Stream and Meadow Restoration with the Feather River CRM, A Citizen's Guide". A second publication, developed as a rack card, was intended for pet owners to understand the link between pet waste and water quality. The pet waste publication included a follow-up newspaper article to raise awareness and inform residents of recently installed pet waste stations.

- Developed a regional watershed newsletter called “Restoration Ripples”. The first edition was published in May 2010. Articles and information is shared on various watershed topics, including water quality, and are submitted by partners and stakeholders both within and outside of the Feather River Watershed. A total of five issues have been distributed from May 2010-December 2012 reaching a readership of 400 people. The newsletters are also available on the Feather River Coordinated Resource Management website at www.feather-river-crm.org under the Publications page.

Task- Watershed Discovery Days

- Held two activities including a Creek Walk on Spanish Creek in September 2011 and a Fly-casting Clinic at the Quincy Creekside Festival in partnership with Trout Unlimited in June 2012. Together, the two Discovery Days reached approximately 55 community members.

Task- Watershed presentations/activities at school/community events

- **Family Science Night** at Quincy Elementary School in 2010, 2011 and 2012 reached approximately 200 K-6 students and families each year. In 2010 did a display and games on water turbidity; in 2011 had an educational booth on beaver adaptations and their role in floodplains; and in 2012 partnered with Plumas National Forest on a stream table demonstration booth.
- **Quincy Earth Day events** in 2010 and 2011 reached approximately 50 community members each year. In 2010 educated the public on the myths and facts about bottled water and in 2011 we partnered with the Feather River Resource Conservation District and educated the public on landscaping with native species to “slow the flow” for water quality and conservation.
- **Great Sierra River Cleanup** was held every year from 2010 to 2012. Cleanups have been held in seven communities throughout Plumas County and have brought together an average of 123 volunteers each year who have picked up a total of 4,379 pounds of garbage and recycling in the Upper Feather River Watershed over the three year period. The event has helped establish ongoing stewardship partnerships with local businesses, organizations, and agencies. In 2011 the cleanup event included a water quality stewardship project that involved the installation of two pet waste stations along popular dog walking areas that follow waterways in Quincy.
- **Other Community Events 2010** – Participated in four community events during spring/summer 2010: Biodiversity Days in May, Trail Daze in June, Solar Cook-Off in July, and the Homegrown Festival in August. The activities or displays featured a 1.5 hour presentation on meadow restoration and full day tour of meadow restoration projects for Biodiversity Days; a “Know Your Watershed” booth/activity at the Trail Daze and Homegrown events; and an “Aquatic Insects” exploration table for kids at the Cook-Off. A total of approximately 175 people were reached through these four events.
- **Wild & Scenic Environmental Film Festival in Quincy** was hosted with partners Trout Unlimited and Plumas Arts in 2010, 2011, and 2012 reaching an average of 185 community members.

- **Summer Youth Programs 2010-2012** – Worked with local summer programs Digging In, Girls Rite, and Chester Library Youth Reading Program in 2010. Educational sessions included a creek walk, land-use planning and watershed model activities, as well as aquatic insect study to a total of 26 youth. In 2012, worked with 8 Upward Bound students and 2 instructors teaching them how to test for basic chemical, physical, and biological water quality parameters.
- **FRC's Watershed Restoration Class** – Taught a day of water quality field monitoring methods and aquatic insect identification to college-aged students each fall from 2010-2012. Water quality data collected by students was submitted annually to World Water Monitoring Day efforts. Taught 48 college students over the three-year period.
- **County Fair Booth** – Partnered with the U.S. Forest Service on a watershed restoration booth at the Plumas-Sierra County Fair in August 2011, using a stream table demonstration and fish tank with live aquatic insects. We reached an estimated 300 fair attendees during the five-day event.
- **Watershed Tours** - Organized the following watershed tours: Tahoe National Forest Restoration Project Tours November 2010; Last Chance Watershed Tour June 2011; Pit River Watershed Tour November 2011. Average tour attendance was 25 participants.

Task- Watershed stewardship web page for regional activities

- In 2009 we developed a Watershed Education & Stewardship page on the Feather River Coordinated Resource Management group website. The page can be found at the following link: http://www.feather-river-crm.org/index.php?option=com_content&view=article&id=58&Itemid=57
The page has links to teacher resources, landowner guides, and a watershed calendar for upcoming watershed meetings, events, and activities.

Task- Action plan for future river education center

- In 2011, we surveyed 24 possible sites and visited the top 10 highest potential sites for a river education center. The pros and cons of each one were evaluated, and a plan for future steps was developed if resources become available to pursue the establishment a river education center in the Upper Feather River Watershed.

Task- Watershed education campaign promotional products

- Developed and purchased watershed awareness promotional products in December 2012 for distribution at community events. These included stainless steel "Kleen Kanteen" water bottles, plant able seed wristbands for children, and laminated watershed decals. All promo items were imprinted with "Clean Water Starts Here" logo or tagline.

Other notable outcomes resulting from education and outreach coordination efforts with local partners during the grant period included the following:

- March 2010 Youth Environmental Stewardship Summit (YESS) attended by three local high schools, bringing over 30 students and instructors together to share environmental projects and hear a presentation on “Sustainable Campuses” from FRC Sustainability Coordinator.
- A three-day teacher workshop in July 2011 was attended by nine 7-12th grade teachers providing them with the skills and resources to implement watershed stewardship projects with their students as part of the “Students As Stewards” program funded with federal RAC funds.
- Mentored three high school senior projects in 2011. One Greenville High senior implemented a riparian restoration project with Forest Service support on Wolf Creek; a second Greenville High senior co-directed and coordinated portions of the 6th grade watershed program for his community; and a Chester High student assisted with a carnivore study on the Lassen National Forest.
- FRC’s TRiO Program supported the introduction and integration of restoration service-learning and assessment of experience with all PUSD 7-8th grade students in 2011, serving approximately 160 students.
- Hired and trained a new field instructor/naturalist to lead the 5-day Plumas to the Pacific field trips in 2012. Funding for the new field instructor was secured in 2011 with federal RAC funds administered by the Forest Service.
- Developed and coordinated an Adventures In Learning activity on water safety and recreational paddle sports held at Bucks Lake the fall of 2011 for 47 Quincy High seniors and 12 FRC students.
- In October 2011 led a field tour to Red Clover Creek watershed with 50 eighth grade students from Portola Jr./Sr. High. As part of the Students As Stewards Program, the field tour introduced students to restoration efforts happening in their watershed and allowed them a hands-on opportunity to assist with restoration efforts by planting and seeding native vegetation on a recently built project. Restoration tours with Quincy, Chester, and Westwood students were taken in the fall of 2012. A total of 81 junior and high school students visited various sites in the watershed and assisted with re-vegetation efforts.
- In coordination/partnership with Lassen and Plumas National Forest, Plumas Audubon Society, Pacific Gas & Electric, Feather River Land Trust, City of Portola, and private landowner Rick Leonhardt we worked with middle and high school students from each high school (approximately 340 students) to facilitate and implement student-led restoration activities on Learning Landscape properties near each school site during the 2011/12 school year. Restoration activities included removing noxious weeds, planting over 500 native plants, staking over 100 willows, and erecting 39 bird nesting boxes as part of the Students As Stewards Program.
- Partnered with Feather River College ETS program on a 2-day environmental service learning restoration program for 7th grade students held at Grizzly Creek Ranch in 2012; ETS also provided assessment services for the 6th grade Watercourse Program helping students track water-based careers they

encountered during the year. In addition, partnered with ETS on a field day to Willow Lake with Chester and Westwood middle school students in May 2012. Presented five sessions to approximately 10 students each on aquatic insect collection and identification for a total of 50 participants.

- Two outreach community events were held in 2009 during the bond freeze with partner support and other education funding including a river cleanup of the Middle Fork Feather River in Portola in May (10 participants); and storm drain stenciling in Greenville to protect Wolf Creek in July (24 participants).

C. Challenges or Opportunities Encountered: (Please describe what has worked and what hasn't; include any solutions you initiated to resolve problems. If your project is not on schedule, please explain why here.)

Establishing long-term sustainability in the 6th grade year-long Watercourse/Plumas to the Pacific Program has been an ongoing challenge. In 2011, our contracted K-12 Watershed Education Coordinator took a part-time assignment with the school district to implement environmental education programs with the Forest Service as part of their Storrie Fire mitigation. The absence of a full time coordinator to lead the 6th grade program was the catalyst to spurring the sixth grade teachers to implement the program and field trips without monthly outside assistance. They did request continued support for coordination and leadership of the 5-day Plumas to the Pacific trips, which we have been able to provide through the acquisition of federal funds administered through the Forest Service. As teachers become more confident and comfortable in implementing the year long watershed program, the less funds it will require for outside coordination assistance. Students, parents, and community members/organizations have already demonstrated their long-term commitment to this program through the continual generous donations to students each year for their field trip expenses. It is estimated that each class in the four main communities, Portola, Quincy, Greenville, and Chester, raise an average of \$5000 per year to cover their P2P field trip expenses such as meals, camping fees, transportation fares, and entrance fees to various venues.

On the same note, training and coordination provided to 7-12th grade instructors through the Students As Stewards program (initiated through leveraged SNC funds) will ensure long-term sustainable use of Learning Landscape properties established near each school site, providing on-going watershed education and stewardship opportunities for future students.

D. Unanticipated Successes Achieved: (Please describe any additional successes beyond completing scheduled tasks or meeting scheduled milestones.)

- A successful three-year (2010-2012) collaboration with the Feather River College Educational Talent Search (ETS) program provided \$30,000 in funding support for transportation expenses for the 6th grade P2P field trips, as well as assessment services that helped students track water-based careers they encountered during

their year-long Watercourse journeys. Funding support was secured for this 2012/13 school year, as well.

- The K-12 Coordinator and students successfully garnered a total of \$1998 for Quincy and Chester students in 2010 and \$3,996 for all four schools (\$999 per school field trip) from the local Fish and Game Commission for the 2012 P2P field trip expenses.
- Plumas Corporation secured a federal grant to cover the costs for a Plumas to the Pacific field instructor/naturalist to lead the week long field trips in 2012. A total of \$17,400 in federal grant funds was awarded in 2012 through the Secure Rural Schools and Community Self-Determination Act of 2000, Public Law 106-393 (Plumas County Resource Advisory Committee (RAC)). This funded the P2P field instructor in 2012, and is providing funding for the 2012/13 K-12 watershed education program coordination and P2P field instructor time.
- In 2010 we successfully leveraged \$2000 in SNC grant funds to secure \$30,130 in federal RAC funding for a watershed education project titled "Students As Stewards". This project began in 2011 and has focused on working with 7th-12th grade students to introduce them to the role of restoration in stewardship, natural resource management, and related issues. Students are given hands-on experiences planning and doing on-the-ground restoration projects on their Learning Landscape sites close to each campus to improve the ecological health of each property. This program has been a successful outgrowth of the 6th grade Watercourse/Plumas to the Pacific watershed education program.

E. Compare Actual Costs to Budgeted Costs: (Please refer to your grant agreement to list your deliverables/budget categories and budgeted costs compared to actual costs incurred during this reporting period in the table below.)

PROJECT BUDGET CATEGORIES	Budgeted SNC Dollars	Actual Dollars
Community Outreach Coordinator	\$28,160	\$31,552.48 ^a
K-12 Regional Watershed Ed. Coordinator	\$58,400	\$218,451.71 ^b
Administrative Costs (15%)	\$12,984	\$27,380.68 ^c
GRAND TOTAL	\$99,544	\$277,384.87

^aActual dollars includes donated time by the Outreach Coordinator for 86 hours at \$35/hr., plus \$383 in travel expenditures for a total contribution of \$3393.

^bActual dollars includes \$10K/yr provided by ETS in 2010, 2011, and 2012 for P2P bus transportation (total contribution \$30K), \$9,000 for the 7th grade environmental service learning program provided by ETS, \$5,994 provided by the Plumas County Fish & Game Commission for 2010 and 2012 field trip expenses such as admission fees to Gray Lodge Wildlife Refuge and the San Francisco Aquarium; \$4,050 in-kind contribution from PUSD for K-12 Education Coordinator office space (\$150/mo for 27 mos); \$3,000 from FRC Outdoor Rec Leadership Program guided rafting trips for 6th grade (\$1,000/yr for 3 yrs); \$2,580 in watershed maps for 6th graders from Plumas Corporation (516 students x \$5/map); \$15,300 of in-kind contributions from volunteer outdoor ed instructors (765 hrs at \$20/hr); \$60,000 in 6th grade fundraising contributions (est. \$5000 per class per yr. x 4 classes for 3 yrs); "Students As Stewards" federal RAC grant for \$30,130 expanding watershed education program to 7-12th grades (2011- 2013).

^cActual dollars includes education program administrative support from a CA Dept. of Conservation Watershed Coordinator grant for a total of \$14,400 (360 hrs at \$40/hr).

Explanation: (if needed)

Actual Dollars are total year to date expenditures including in-kind match contributions.

F. Were there any other relevant materials produced under the terms of this Agreement that are not a part of the budgeted deliverables? If so, please attach copies. (Include digital photos, maps, media coverage of project, or other work products.)

Photos/backup documentation of outreach and education events reported for the last six months: Upward Bound student education; GSRC photos/news article; Forest Service Fall Festival outreach; Feather River College Watershed Restoration class education; Students as Stewards restoration project field trip news article.

Materials produced last six months: Action plan for a future river education center; Pet waste rack card and news article; photo of promotional items developed and purchased for distribution at future outreach events.

G. Next Steps: (Work anticipated in the next 6 months, including location and timing of any scheduled events related to the project.)

N/A

Please Complete this Section for FINAL Report ONLY

Capacity-Building Results and Collaboration and Cooperation with Stakeholders:

(What partnerships did you initiate or strengthen as a result of this project? How did they affect the project outcome? If applicable, how did this grant increase your organization's capacity? What is your plan to sustain this increase?)

The biggest direct partnership initiated under this project was the collaboration with the Educational Talent Search (ETS) program at Feather River College. This partnership directly impacted the project by providing transportation funds for the Plumas to Pacific field trips, allowing us to spread the one year project budget over a three year period. The project outcome resulted in reaching over 500 students instead of 200.

In addition, by leveraging some of the K-12 education coordination funding we were able to increase our capacity by securing funding to provide watershed education and stewardship opportunities to grades 7-12 through the Students As Stewards program. Through collaboration with the Feather River Land Trust's Learning Landscapes, this program has served an estimated additional 130 students and trained 9 instructors on watershed stewardship and restoration.

Now that the 7-12th grade instructors have had some training and have implemented some small stewardship projects with their students, they have the skills, tools, and confidence to continue this program with future students without direct assistance. With a little coordination support they can sustain the increased capacity and continue providing watershed stewardship and restoration activities with students on their Learning Landscape properties.

Description of Project Accomplishments:

1. How did the Project succeed in accomplishing its intent?

All K-12 Education-related intentions and objectives were not only met but tripled. This tripling effect allowed us to strategically leverage partnerships and additional funding to stretch one year of funding to three years. Reaching over 500 students instead of 200 is the kind of success we all can be proud of.

Likewise, objectives were surpassed with our community outreach efforts. Also leveraged for three years with just one year of funding, most grant deliverables were doubled or tripled in quantity.

2. Describe any follow-on or indirect benefits resulting from the Project.

Stretching one year of funding to three years of support allowed us time to better refine our local partnerships and capacity, which brought greater sustainability to the program. The 6th grade program is the keystone of outdoor education efforts in the region. Three

years of success provided positive support to the development of the Storrie Fire restoration project partnership with the Forest Service, and the Learning Landscapes program (including Students As Stewards) with the Feather River Land Trust. These efforts represent an entire K-12 sequencing of outdoor education and reach more than 2,000 kids annually.

Another indirect benefit was the ability to strengthen our partnerships with Feather River College, local businesses, and other non-governmental organizations in the community such as the Parent Club Organization at Quincy Elementary, Feather River Trout Unlimited, Feather River Land Trust, and Women's Mountain Passages.

3. Describe any significant experiences, unanticipated results or noteworthy events that create a "wow" factor.

Tripling impacts directly increased sustainability, and indirectly expanded our capacity to reach every child in the region. The Great Sierra River Clean-up was an unanticipated regional event that tied our cleanups into a larger effort and has become a foreseeable annual activity in several communities. Lastly, the website upgrade we completed has improved our presence on the web significantly by providing more pertinent education information as well as a more appealing design. All of these successes are worthy of a "Wow"!

4. Describe any Lessons Learned.

Working with SNC demanded an upgrade in our monitoring and reporting culture. While we knew that we were successful, we did not have all systems in place to tell that story. While reporting is not at the top of the list for our educators, it directly supports the top of the list and thus is indispensable.

We also experienced difficulties in effectively reaching landowners in our rural communities. If funded for more community outreach education in the future, we plan to target this audience in new and different ways.

5. How do you intend to share the results of your work on this project?

The results of this work are part of a continuous feedback loop that supports and sustains our efforts for watershed education and stewardship. We intend on doing this work for years and decades to come. It is imbedded in the culture of the communities; however, we do need to continue telling this story to a wider audience so that it does actually sustain itself into the future. We will need this as long as we and water are here.

A tangible means to share the project results will be to post the final approved project report on our website's education page.

SNC-approved Performance Measures: (Please list each Performance Measure for your Project, as identified in your Grant Agreement, and the results/outcomes.)

Performance Measure #1: Resources Leveraged in the Sierra Nevada

Table 1 outlines the resources we were able to leverage during the grant period through volunteer hours, other funding sources, and major in-kind contributions. The number of volunteer hours for participation in community outreach events was not calculated as part of resources leveraged because they were not consistently tracked throughout the grant period.

In summary, a total of \$18,310 was leveraged through volunteered time from our subcontracted Community Outreach and Education Coordinator and hours donated by community professionals from the Forest Service, Plumas Corporation, Feather River College and others to help lead watershed hikes at Plumas County's Outdoor Education Camp. The Outdoor Education Camp kicks off the 6th grade watershed study year with an introduction to the three main ecosystems in their watershed: forest, creek, and meadow.

Project funds from other sources primarily involved support of field trip expenses, materials, and administrative costs. A total of \$25,007 was provided as match from Plumas County Fish & Game Commission, Plumas County Office of Education, Feather River College, and Plumas Corporation.

Major in-kind contributions (equaling \$10,000 or more) provided for Plumas to the Pacific field trip bus transportation, student field trip expenses, additional 7-12 grade environmental education programming, and program coordination/administration. A total of \$134,530 was contributed through in-kind match from FRC's Educational Talent Search program, 6th grade student fundraising, federal grant funds through the Secure Rural Schools Act, and watershed coordinator funding from the CA Department of Conservation.

Total resources leveraged through match contributions under this project equaled \$177,847. This is more than four times the original budgeted match of \$40,000.



Table 1. Resources leveraged under the Feather River Watershed Stewardship and Education Project, Agreement No. G0822002

Volunteer Hours				
Volunteers		# of hours	Rate per hr	Amount
Kristy Hoffman, Outreach Coordinator		86	\$35.00	\$3,010.00
Outdoor Ed Camp Instructors (FRCRM, USFS, FRC)		255 hrs./yr x 3 yrs= 765	\$20.00	\$15,300.00
Project Funds from Other Sources				
Matching Fund Source		Description		Amount
Plumas County Fish & Game Commission		Plumas to the Pacific field trip expenses, i.e. admission to wildlife refuge, aquarium, etc.		\$5,994.00
Plumas County Office of Education/Plumas Unified School District		Office space (est. \$150/mo for 9 mo/yr for 3 yrs)		\$4,050.00
Kristy Hoffman, Outreach Coordinator		Travel and lodging for outreach education training		\$383.00
Feather River College Educational Talent Search Program		7th grade environmental service learning program complimenting "Students As Stewards" Program		\$9,000.00
Feather River College Outdoor Recreation Leadership Program		Adventures in Learning rafting field trip guides provided by FRC (est. \$1000/yr x 3 yrs)		\$3,000.00
Plumas Corporation		Watershed maps for 6th graders (516 students x \$5/map)		\$2,580.00
Major In-Kind Contributions				
Matching Fund Source		Description		Amount
Feather River College Educational Talent Search Program		Bus transportation costs for Plumas to the Pacific field trips (\$10,000/yr for 3 yrs)		\$30,000.00

6th grade Class Fundraisers		Students held fundraisers throughout the school year for Plumas to the Pacific field trip expenses, including camping fees, food, and lodging. (est. \$5,000 per class per yr x 4 classes for 3 yrs)	\$60,000.00
Secure Rural Schools and Community Self-Determination Act of 2000, Public Law 106-393 (Plumas County RAC)		Education project "Students As Stewards" program using "Learning Landscapes" properties for 7-12th grade students. Leveraged \$2K in SNC funds for coordination to secure grant.	\$30,130.00
Department of Conservation Watershed Coordinator Grant		Watershed Coordinator salary and benefits for coordinating education and outreach programs and grant administration. (est. 120 hrs/yr x 3 yrs x \$40/hr)	\$14,400.00
Total Match Contributed			\$177,847.00

Performance Measure #2: Number and Diversity of People Reached

The Upper Feather River Watershed lies predominately in Plumas County with a population of approximately 20,000. The largest community is Quincy, the county seat, with a population of a little over 5,000. In these small rural communities, public events tend to reach the same people over and over with some events in the summer reaching larger audiences due to increased tourism.

Tracking of participants in outreach activities and events was accomplished through sign-in sheets and head counts taken by the event organizer (usually the Community Outreach Coordinator or Watershed Coordinator). Other outreach efforts such as publications and web page use was based on the number of publications distributed and number of hits recorded on the website's Education and Stewardship page. Total estimated number of people reached through community outreach efforts was estimated at 6,050. In some cases, people may have been reached more than one time if participating in multiple events. These numbers do not include the potential for 10,000 people reached through the publication of approximately 12 press releases and news articles in local newspaper.

The diversity of people reached was primarily Sierra Nevada residents and users of Sierra Nevada resources, estimated at 1,850 and 3,174 respectively. The General Public was the next highest variation of estimated numbers reached with 650, and Resource Professionals at 356.

The estimated total number of people reached through the K-12 Watershed Education component of the project is 1350. School-based education efforts directly funded by this SNC project reached a total of approximately 1200 students (Youth <18 yrs of age) through the 6th grade Watercourse/Plumas to the Pacific program/field trips and the Trout in the Classroom program. Additional people reached through the K-12 education efforts including teachers and parents as Sierra Nevada residents and users of Sierra Nevada resources totaled approximately 150.

Performance Measure #3: Number and Type of Jobs Created

SNC project funding directly supported one educational service job (K-12 Regional Watershed Education Coordinator), one information job (Community Outreach Coordinator), and one administrative job (FRCRM Watershed Coordinator). The following full-time equivalent jobs funded by this SNC grant are listed in Table 2.

Table 2. Number of FTE jobs created by the SNC-funded Feather River Watershed Stewardship and Education Project, Agreement No. G0822002

Occupational group	Number of people employed	Length of employment (weeks)	Average number of hours worked per week	Total FTEs	Employment season
Educational Services	1	144	11	0.76 FTE	Year round
Information	1	176	4	0.34 FTE	Year round
Administrative	1	176	2.5	0.21 FTE	Year round

The following jobs listed in Table 3 are directly attributed to this SNC-funded project and both are expected to continue one year after the closing date of this grant. The K-12 Regional Watershed Education Coordinator position (educational services) is planned to continue indefinitely with partnership support, including strong community support for the 6th grade watershed education program "The Watercourse and Plumas to the Pacific". The Outreach Coordinator position (information) is less certain due to lack of secured funding for the long term. Due to program cutbacks, public outreach work may be absorbed by existing Plumas Corporation staff in the future rather than subcontracted.

Table 3. Number of FTE jobs directly attributed to the SNC-funded Feather River Watershed Stewardship and Education Project, Agreement No. G0822002

Occupational group	Total FTEs directly attributable to this SNC funded project	Expected to exist one year after the project has ended	Expected to exist three years after the project has ended
Educational Services	0.76	yes	expected
Information	0.34	yes	unknown

Unrelated to actual jobs created, but directly related to natural resource water-related careers, the FRC ETS program provided approximately 40 hours of direct service on a watershed careers reflection activity using a portfolio format. Students each selected one career they encountered during the course of the Watercourse curriculum to research and created a digital presentation to share with their classes.

Performance Measure #5: Measurable Changes in Knowledge and Behavior

In 2009/2010 results of the pre- and post-assessment of 6th grade students in Knowledge & Understanding was as follows: The mean score on the pre-test was 13 out of a possible 100. The mean score on the post-test was 86. An increase of 73 points is incredible; however, it is important to note that students generally had no prior contact with this specialized knowledge. Student retention of knowledge at the end of the year was certainly high, although in the current testing culture it is to be expected. These results are a point of pride for teachers and students. One desire is to test these same students many years after participation to measure retention. Lastly, behavioral measurement is a self reported qualitative measure. In 6th grade students often respond in a way that will place them in a positive light with peers and teachers. In this way pre-program measures showed that 81% of students reported a value of 5 that they cared about their watershed very much (on a 1 to 5 scale). Sixteen percent of students reported a value of 4. In the post-assessment 98% of participating students reported a value of 5, with all remaining students identifying a value of 4. We consider this a positive, but expected result.

Following the 2009/2010 school year the decision was made to use product assessment as the means to evaluate the success of the program. This was after five years of similar results with the traditional pre- and post-assessments. The product assessment was done through the use of a journal/portfolio that students employ to capture their experience and learning. Teachers have expressed positive results to the point that we have moved from a fill in the blank format journal to an open format with rubrics to grade results. Copies of this journal are available upon request.

Community outreach efforts did not conduct any pre-project assessments on public knowledge or attitudes prior to the implementation of outreach events and activities

through this project. However, post-project changes described here are based on antidotal information obtained through personal interactions and observations of event and activity participants throughout the grant period and cleanup results from the GSRC.

While there is no simple way to gauge whether our outreach contacts changed behaviors or attitudes, the positive experiences we had definitely indicate we actively engaged community members in learning about their watershed. For example, the "Know Your Watershed" booth we instigated at several events generated lots of opportunity for open dialogue and questions that ran the gamut from water quality issues to watershed geography. These dialogues allowed opportunity to educate and share experiences and information. Most people we made contact with were genuinely interested and asked questions about the watershed. Another popular outreach activity was our exploration of aquatic insects. Children and adults alike find bugs fascinating and giving them hands-on opportunities to examine benthic macroinvertebrates up close always generated a big crowd around our table/booth at events. We found that most people were unaware that aquatic insects are indicators of stream health, so although obtaining this knowledge may not have made any measureable changes in behavior, we ignited sparks of curiosity as well as knowledge about identifying characteristics and macroinvertebrates' roles in an aquatic environment.

The water quality stewardship project implemented as part of the Great Sierra River Cleanup in 2011 involved the installation of two pet waste stations in popular dog walking areas along waterways in Quincy. While we did not have any pre-project information on pet owner behavior/attitudes prior to the station installations, we did have the tally of pet waste picked up during the cleanup prior to and after the waste station installations. At the 2011 cleanup before the stations were installed, we tallied 180 pet waste picked up along Spanish Creek at Gansner Park and the bike path in Quincy. After the stations were installed at both of these locations the pet waste tallied during the 2012 cleanup was only nine. That is a 95% reduction in pet waste picked up during the cleanup between 2012 and 2011. We feel this strongly indicates a measurable change in behavior and attitudes of pet owners who walk their dogs in these areas. We have been asked to put more stations up in Quincy and there is now interest in installing stations around Lake Almanor, so there are opportunities to increase this positive change in the watershed in future years.

